

REMARKS

The Office Action dated October 31, 2007, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1, 2, 7-9, 12, 14, 15, 22, 25, 27-30, 32-35, 37-40, and 42-47 have been amended to more particularly point out and distinctly claim the subject matter of the invention. Claim 48 has been added. No new matter has been added. Claims 1-4, 6-9, 11-17, 19-22, 24-30, 32-35, and 37-48 are respectfully submitted for consideration.

As a preliminary matter, an interview was conducted with the Examiner on January 22, 2008. Applicants thank the Examiner for the courtesies extended Applicants' representative during the interview. Independent claims have been amended to include "within the coverage area or a bit rate defined for each sub-area," as requested by the Examiner. In light of the amendments, each of claims 1-4, 6-9, 11-17, 19-22, 24-30, 32-35, and 37-48 should be allowed.

Claims 42-47 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,728,217 of Amirijoo (Amirijoo) in view of U.S. Patent 6,665,538 of Hunte (Hunte). The Office Action took the position that Amirijoo and Hunte disclose all of the elements of claims 42-47. It is respectfully submitted that the claims recite subject matter that is neither disclosed nor suggested in Amirijoo and Hunte.

Independent claim 1, upon which claims 2-4, 6-9, and 11-13 are dependent, recites a method for deciding on handover in a cellular communication system that includes

collecting bit rate information related to a mobile station, when the mobile station is moving from a first cell to a second cell, wherein the mobile station initially has a connection to at least the first cell providing a certain bit rate to the mobile station, the collecting comprising measuring the bit rate provided to the mobile station by the first cell and/or a bit rate provided to the mobile station by the second cell. The method also includes using the bit rate information for deciding on when handover of the mobile station from the first cell to the second cell should be carried out by triggering the mobile station handover from the first cell to the second cell when the bit rate provided by the first cell and/or the bit rate provided by the second cell fulfils a predetermined condition or predetermined conditions. The bit rate information is a transfer rate with which data is transmitted within the coverage area or a bit rate defined for each sub-area.

Independent claim 14, upon which claims 15-17, 19-22, and 24-26 are dependent, recites a cellular communication system that includes cells and a mobile station having a connection to at least a first cell providing a certain bit rate to the mobile station; wherein the system is configured to when the mobile station is moving from the first cell to a second cell, collect bit rate information related to the mobile station by measuring the bit rate provided to the mobile station by the first cell and/or a bit rate provided to the mobile station by the second cell. The system is also configured to use the bit rate information to decide on when mobile station handover from the first cell to the second cell should be carried out by triggering the execution of handover of the mobile station from the first cell to the second cell when the bit rate provided by the first cell and/or the bit rate

provided by the second cell fulfils a predetermined condition or predetermined conditions. The bit rate information is a transfer rate with which data is transmitted within the coverage area or a bit rate defined for each sub-area.

Independent claim 27 recites a system element for controlling handovers in a cellular communication system comprising cells and a mobile station having a connection to at least a first cell providing a certain bit rate to the mobile station, wherein the system element is configured to when the mobile station is moving from the first cell to a second cell, collect bit rate information related to the mobile station by measuring the bit rate provided to the mobile station by the first cell and/or a bit rate provided to the mobile station by the second cell. The system is also configured to use the bit rate information for deciding on when handover of the mobile station from the first cell to the second cell should be carried out by triggering the execution of handover of the mobile station from the first cell to the second cell when the bit rate provided by the first cell and/or the bit rate provided by the second cell fulfils a predetermined condition or predetermined conditions. The bit rate information is a transfer rate with which data is transmitted within the coverage area or a bit rate defined for each sub-area.

Independent claim 42 recites a mobile station for use in a cellular communication system comprising cells, the mobile station being configured to collect bit rate information related to the mobile station by measuring, when the mobile station has a connection to at least a first cell, a bit rate provided to the mobile station by the first cell and/or a bit rate provided to the mobile station by a second cell. The mobile station is

configured to use the bit rate information to decide on when handover of the mobile station from a first cell to the second cell should be carried out by triggering the execution of handover of the mobile station from the first cell to the second cell when the bit rate provided by the first cell and/or the bit rate provided by the second cell fulfils a predetermined condition or predetermined conditions. The bit rate information is a transfer rate with which data is transmitted within the coverage area or a bit rate defined for each sub-area.

Independent claim 43 recites a method for deciding on handover in a cellular communication system that includes collecting bit rate information related to a mobile station, the collecting comprising measuring a bit rate provided to the mobile station by a first cell and/or a bit rate provided to the mobile station by a second cell. The method also includes using the bit rate information for deciding on handover of the mobile station from the first cell to the second cell, the deciding comprising deciding to perform the mobile station handover from the first cell to the second cell when the bit rate provided by the first cell and/or the bit rate provided by the second cell fulfils a predetermined condition or predetermined conditions. The mobile station initially has a connection to at least the first cell providing a certain bit rate to the mobile station. The bit rate information is a transfer rate with which data is transmitted within the coverage area or a bit rate defined for each sub-area.

Independent claim 44 recites a cellular communication system that includes cells and a mobile station. The system is configured to collect bit rate information related to

the mobile station by measuring a bit rate provided to the mobile station by a first cell and/or a bit rate provided to the mobile station by a second cell. The system is also configured to use the bit rate information for deciding on mobile station handover from the first cell to the second cell such that the system is configured to decide to trigger the execution of handover of the mobile station from the first cell to the second cell when the bit rate provided by the first cell and/or the bit rate provided by the second cell fulfils a predetermined condition or predetermined conditions. The bit rate information is a transfer rate with which data is transmitted within the coverage area or a bit rate defined for each sub-area.

Independent claim 45 recites a system element for controlling handovers in a cellular communication system comprising cells and a mobile station, wherein the system element is configured to collect bit rate information related to the mobile station by measuring a bit rate provided to the mobile station by a first cell or a bit rate provided to the mobile station by a second cell, or a bit rate provided to the mobile station by a first and a bit rate provided to the mobile station by a second cell. The system element is configured to use the bit rate information for deciding on handover of the mobile station from the first cell to the second cell such that the system element is configured to decide to trigger the execution of handover of the mobile station from the first cell to the second cell when the bit rate provided by the first cell and/or the bit rate provided by the second cell fulfils a predetermined condition or predetermined conditions. The bit rate

information is a transfer rate with which data is transmitted within the coverage area or a bit rate defined for each sub-area.

Independent claim 46 recites a mobile station for use in a cellular communication system comprising cells, the mobile station being configured to collect bit rate information related to the mobile station by measuring a bit rate provided to the mobile station by a first cell and/or a bit rate provided to the mobile station by a second cell. The mobile station is configured to use the bit rate information for deciding on handover of the mobile station from the first cell to the second cell such that the mobile station is configured to decide to trigger the execution of handover of the mobile station from the first cell to the second cell when the bit rate provided by the first cell and/or the bit rate provided by the second cell fulfils a predetermined condition or predetermined conditions. The bit rate information is a transfer rate with which data is transmitted within the coverage area or a bit rate defined for each sub-area.

Independent claim 47 recites a system for deciding on handover in a cellular communication system that includes a collector configured to collect bit rate information related to a mobile station by measuring a bit rate provided to the mobile station by a first cell and/or a bit rate provided to the mobile station by a second cell. The system includes a decider configured to decide on handover of the mobile station from the first cell to the second cell using the bit rate information by triggering the execution of handover of the mobile station from the first cell to the second cell when the bit rate provided by the first cell and/or the bit rate provided by the second cell fulfils a predetermined condition or

predetermined conditions. The bit rate information is a transfer rate with which data is transmitted within the coverage area or a bit rate defined for each sub-area.

Independent claim 48, upon which claims 28-30, 32-35, and 37-41 are dependent, recites an apparatus that includes a collector configured to collect bit rate information related to a mobile station in a cellular communication system when the mobile station is having a connection to at least a first cell providing a certain bit rate to the mobile station and when the mobile station is moving from the first cell to a second cell, by measuring the bit rate provided to the mobile station by the first cell and/or a bit rate provided to the mobile station by the second cell. The apparatus includes a decider configured to use the bit rate information for deciding on when handover of the mobile station from the first cell to the second cell should be carried out by triggering the execution of handover of the mobile station from the first cell to the second cell when the bit rate provided by the first cell and/or the bit rate provided by the second cell fulfils a predetermined condition or predetermined conditions. The bit rate information is a transfer rate with which data is transmitted within the coverage area or a bit rate defined for each sub-area.

As will be discussed below, Amirijoo, Hunte, and Santhoff fail to disclose or suggest all of the elements of any of the presently pending claims.

Amirijoo generally describes a system and method for modifying the data rate for calls in a cellular network. The Office Action took the position that Fig. 3A and Fig. 3B are in particular relevant when assessing the patentability of the present invention as claimed in the independent claims 1, 14, 27 and 42-47. However, Applicants respectfully

submit that Amirijoo fails to disclose or suggest several elements of the independent claims. For example, Amirijoo fails to disclose or suggest “collecting bit rate information related to a mobile station, when the mobile station is moving from a first cell to a second cell wherein the mobile station initially has a connection to at least the first cell providing a certain bit rate to the mobile station, the collecting comprising measuring the bit rate provided to the mobile station by the first cell and/or a bit rate provided to the mobile station by the second cell,” as recited in the presently pending claims.

As regards the above claim limitation, the Office Action particularly referred to step 302 in Fig. 3A. Step 302 in Amirijoo relates to signal strength and bit error rate (BER) measurements sent to BSC. However, Amirijoo fails to disclose or suggest in any way measuring the bit rate provided to the mobile station by the first cell and/or a bit rate provided to the mobile station by the second cell. It is respectfully noted that signal strength measurements or bit error rate (BER) measurements, which merely indicate the percentage of the total number of received bits wrongly detected as described at column 3, lines 65-67, are not indicative of the bit rate provided and thus do not correspond to the measurement of the bit rate provided to the mobile station by a cell as claimed.

Moreover, Amirijoo does not disclose or suggest any kind of collection of bit rate information performed in particular when the mobile station is moving from a first cell to a second cell (as was admitted by the Examiner in the previous Action).

Applicants respectfully submit that Amirijoo fails to disclose or suggest “using the bit rate information for deciding on when handover of the mobile station from the first cell to the second cell should be carried out by triggering the mobile station handover from the first cell to the second cell when the bit rate provided by the first cell and/or the bit rate provided by the second cell fulfils a predetermined condition or predetermined conditions,” as recited in the presently pending claims.

As regards the above claim element, the Office Action particularly referred to steps 310-332 in Fig. 3A. In step 312 of Amirijoo, the signal strength and bit error rate measurements are analyzed to determine if the data call should be handed over to one of the neighboring cell(s). See column 4, lines 46-50. In other words, Amirijoo suggests using signal strength and bit error rate measurements for a basis of a handover decision. Thus, it is clear that Amirijoo fails to disclose or suggest triggering the mobile station handover from the first cell to the second cell when the bit rate provided by the first cell and/or the bit rate provided by the second cell fulfils a predetermined condition or predetermined conditions, but instead teaches away from the present invention as claimed.

Applicants respectfully submit that Amirijoo fails to disclose or suggest “wherein the bit rate information is transfer rate with which data is transmitted within the coverage area or a bit rate defined for each sub-area,” as recited in the presently pending claims. The Office Action acknowledged that Amirijoo fails to disclose the above-described claim feature.

Hunte generally describes a method and apparatus for determining a cell border between first and second cells in a cellular communications system. In the method described information relating to the transfer rates of communications with mobile stations immediately before and after cell handover from the first cell to the second cell is stored. The stored information is analysed to determine the cell border between the first and the second cell. It is respectfully noted that the analysis of the stored information takes place after the cell handover. Thus, it is clear that the stored information in Hunte is not used for deciding on the cell handover. More specifically, Hunte in particular fails to disclose or suggest "using the bit rate information for deciding on when handover of the mobile station from the first cell to the second cell should be carried out," as recited in the presently pending claims.

Hunte does not disclose or suggest in any way using bit rate information for deciding on handover. In actual fact, Hunte does not even teach any particular way of performing a cell handover but in this regard merely refers to known prior art methods of handling cell handovers. See, for example, column 4, lines 63-64 of Hunte.

Furthermore, Applicants respectfully submit that Hunte fails to disclose "wherein the bit rate information is transfer rate with which data is transmitted within the coverage area or a bit rate defined for each sub-area." Since Hunte does not disclose the use of "bit rate information" as claimed in the first place, it necessarily also fails to teach that such bit rate information is transfer rate with which data is transmitted. For example, Fig. 2 of

Hunte referred to by the Office Action makes no mention of any bit rate information but merely lists data transfer rates provided by various coding schemes.

Claims 1-4, 6, 7, 9, 13-17, 19, 20, 22, 26-30, 32, 33, 35, and 39-41 were rejected under 35 U.S.C. 103(a) as being unpatentable over Amirijoo in view of Hunte and further in view of U.S. Patent No. 6,907,244 of Santhoff (Santhoff). The Office Action took the position that Amirijoo, Hunte, and Santhoff disclose all of the elements of claims 1-4, 6, 7, 9, 13-17, 19, 20, 22, 26-30, 32, 33, 35, and 39-41. It is respectfully submitted that the claims recite subject matter that is neither disclosed nor suggested in Amirijoo, Hunte, and Santhoff.

Santhoff generally describes a hand-off between ultra-wideband cell sites. Santhoff does not disclose anything of particular relevance that would remedy the above deficiencies of Amirijoo and Hunte. Therefore, the present invention as claimed in the independent claims is patentable over Amirijoo in view of Hunte and further in view of Santhoff.

For the reasons explained above, it is respectfully submitted that each of claims 1-4, 6-9, 11-17, 19-22, 24-30, 32-35, and 37-48 recites subject matter that is neither disclosed nor suggested in the cited art. It is, therefore, respectfully requested that all of claims 1-4, 6-9, 11-17, 19-22, 24-30, 32-35, and 37-48 be allowed, and that this application be passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosures: Additional Claim Fee Transmittal
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